

# BOE Notes

FDOT Program Management- Estimates Systems Support

2/19/2018

February 2018

## February 2018 Estimator's Workshop

### BOE & Pay Item Updates

Welcome to the February Estimator's Workshop. Below are a few reminders for BOE users. **New/updated text is shown in brown.**

The Basis of Estimates (BOE) is intended to help Designers, Reviewers, Estimators, Bidders, Contractors, and CEIs. Update Training will assume that attendees has a working knowledge of Pay Items, Specifications, and Summary Boxes. Users without this working knowledge are encouraged to attend BOE Training.

#### **Contact Database, aka Contact Management E-Updates and Contact Mailer**

Used by Design, Construction, Program Management, and other offices to distribute update notices and important information.

<http://www.fdot.gov/designsupport/contactdatabase.shtml>

Update your preferences every 6-12 months!

**Part 1: Introduction** will provide updates to general background information contained within the first 10 chapters of the **BOE**; **Part 2: Pay Item Updates** will provide detailed information about recent/pending pay item changes.

**Registration/Updates:** Please remember to register through the Contact Management/E-Updates for important announcements from Program Management, Design, Construction, and others. This is a "self-service" area. Remember to update your preferences regularly, as new features are added periodically.

**Units and Precision:** Precision levels with all units are all standardized through the Designer Interface. As a quick guide, all units are paid to the nearest whole number, except for: 0.1: Cubic Yard, Cubic Foot, Ton, MB lumber; 0.01: Acre; and 0.001: Gross Mile Stripe.

**DQE/FUSE, AASHTOWare TRANSPORT/PrP, Webgate:** Alphabet Soup? No- just a few letters to describe our estimating systems/software. **Design Quantities and Estimates (DQE)** replaced the old AASHTOWare TRANSPORT Proposal Estimating System (PES) and Cost Estimating System (CES)- both

## Update Outline

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### Part 1: Introduction

- Registration/Updates
- Units & Precision
- DQE/FUSE, AASHTOWare TRANSPORT/PrP, Webgate
- Requesting Pay Items: Open/Activate vs New
- Tech Spec vs Plan Notes
- Summary Boxes
- Formatting Pay Items
- Questions?

### Part 2: Pay Item Updates

- 100s
  - MOT- Signals
  - MOT- Ped LCDs
  - Clearing & Grubbing
- 200s- Earthwork
- 300s- Pavement
- 400s- Structures
- 500s- Incidental
- 600s- Traffic Control
- 700s- Signs, Lights, etc.
- 800s- Mass Transit
- 900s- Special
- 1000s- Utility JPA (-56)

part of the TRANSPORT software package. The current AASHTOWARE software package is **Project Preconstruction (PrP)**. Other AASHTOWare modules include SiteManager and Bridge Management. Webgate is an FDOT “doorway” into the Designer Interface and Reports menu; all designed and maintained by the FDOT Office of Information Technology (OIT).

**Requesting Pay Items:** Several quick questions should always be asked before selecting any pay item:

- Is the specification applicable? The first 3 digits of the pay item number correspond to the applicable specification section.
- Is a design standard applicable? The new numbering system, effective with the 2017-2018 standard plans, will help identify the possible index number(s).
- Is this an APL item?
- Are there any project specific issues to consider for this item?

Based on your project’s conditions, request your pay items at Phase II (60% plans)- when you load your pay items. Remember to include the Project Number, requested item description, and specs/details that may be applicable. Do not include BOE pages, standard specs or standard plans; these are available online. Send the request to the District Estimator, with copies to the FDOT Project Manager and BOE Coordinator.

Open/Activate items are generally opened the same day.

New/Expanded items may be reviewed by the responsible office- Roadway, Drainages, Structures, etc. Please allow 3-4 days; feel free to follow-up if you haven’t received a response by the 4<sup>th</sup> business day. We all get busy- *friendly reminders* are appreciated.

**Tech Specs vs Plan Notes:** Before deciding on a Tech Spec or plan note, ask “What does the applicable standard or specification say?” Know the parts of a specification.

Specification considerations:

- Modified Special Provision (MSP) is used to change an existing standard specification.
- Technical Special Provision (TSP) is used to cover situations without existing specs.
- No spec needed; existing spec may include “unless otherwise called for in the plans”

Plan note considerations:

- Never use a plan note to repeat, emphasize, or change a standard or specification.
- Plan notes are great for project specific information
- Quantity or location specific information: Use the Summary Box’s Design Notes column.

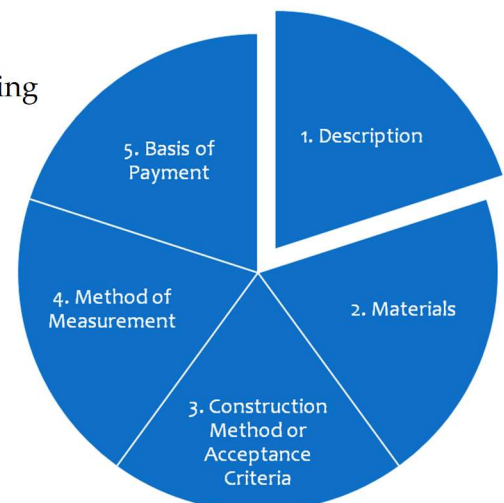
### Need a pay item?

**Open/Activate an existing pay item shown in the BOE structure:** send an e-mail. Most items are opened the same day.

**New/Expanded pay item structure:** send details, plan sheets, product info, and/or project conditions for the proposed item. Note: a picture/graphic is worth 1,000 words. Draft specs/requirements are also helpful. Please allow 3-5 days for reviews.

**Request items at Phase II (60% plans), or as soon as the need is identified!**

*If the specs don't apply, DO NOT USE the pay item!*



- Details, per the specification: “As specified in the plans or contract documents”

In either situation, the Designer is responsible for ensuring that complete requirements (all parts of the specification) are included in the contract documents for each pay item!

**Summary Boxes and Tabulation Sheets:** All pay items must be quantified BY LOCATION on either a Summary Box or Tabulation Sheet. Chapter 8 provides guidance for completing the summary boxes. Each pay item group identifies which summary box should be used.

- Use the Design Notes Column, as needed, to describe location specific conditions
- For Lump Sum pay items, the quantities for the secondary units MUST be identified by location.
- For Lump Sum PROJECTS, all work MUST be quantified by location, using the same summary boxes as a traditional pay item project. Do not total the individual quantities at the pay item level.

If you have component work, without component plans, insert the applicable sheets in the Roadway plans. For Example: Minor \_\_\_\_ Work (lighting, signals, landscaping). Insert the applicable tabulation sheet(s) behind the Summary Boxes. See additional guidance in Chapter 8.

**Formatting pay items:** Chapters 6 and 10 of the BOE provide guidance on formatting pay items. While the first 3 digits correspond with the applicable specification section, the remaining digits vary as needed.

Other general reminders:

- If the specification doesn’t apply, don’t use the pay item.
- Temporary application = temporary pay item, i.e. Maintenance of Traffic, Erosion control. The contractor owns and maintains the products.
- Permanent pay item = permanent application. The product remains with the project after final acceptance.
- Don’t select a pay item based on a description that is “close enough”.

## Pay Item Updates

The Offices of Design, Construction, Traffic Ops, and Program Management are aware of the need to implement new policies, while trying to avoid unnecessary revisions late in the design process. To help balance these needs, the Coordination Team helps to coordinate the implementation of major and minor updates.

### Major vs Minor Updates

Major- Policy Change	Minor- Clarification
Bulletin	No Bulletin; affected projects contacted, depending on change and date
Specification or Design Standard Change	No change
PPM/FDM, TEM, or other manual change	No significant change
6-12 month notice, coordinated implementation	Effective dates vary

The updates below are briefly described; please refer to the Basis of Estimates and/or the applicable specification for complete details. For questions on any of these issues, please contact the person(s) identified in the applicable bulletin, or the BOE Coordinator for other updates.

Item Group	Description	Effective Date	Notes
102- 1-	Maintenance of Traffic, LS		Reminder to NOT quantify temporary asphalt or other materials for maintaining pedestrian way.  FUTURE: Design is considering alternative spec language and FDM instructions for pedestrian paths. Do not allow any “prescriptive” language for specific materials using current specifications.
102- 2-	Special Detour		Usually 1 Special Detour per MOT phase, even if multiple areas use Temporary Asphalt. See BOE details.
102- 14- vs 999-102-	Traffic Control Officer vs Speed and Law Enforcement Officer		<b>Traffic Control Officer:</b> Pay item for the contractor’s use with MOT, in accordance with Section 102 and Index 600. <b>Speed and Law Enforcement Officer:</b> Pay item controlled by the Engineer/CEI, usually on limited access highways, for controlling speed. Contract and payment is between the Department and Law Enforcement agency; money does NOT go through the construction contractor.
102- 71-	Temporary Barrier	Jul 2017- July 2018	Description changed from “Temporary Barrier Wall”. Either description acceptable for transition period.
102- 74-	Channelizing Device	Jan 2018	Change from ED to LF. <b>MUST SHOW locations and quantities in new summary box and on plans.</b>
102-104- and 102-107-	Temporary Signalization and Maintenance; Temporary Detection and Maintenance		General guidance: Use BOTH pay items for EACH intersection, for the FULL DURATION of the contract. See BOE details for additional info.  NOTE: Do not confuse “intersection” items above for 2-way, 2-lane flagger assistance devices.
107-1- and 107-2-	Litter Removal and Mowing		Items are quantified BY LOCATION. For new/widening projects, the locations will vary, due to applicable areas. For resurfacing projects, the locations will normally remain the same throughout the project. See BOE details.  PENDING: CO is working on specification and BOE text to limit 107 items to “existing turf”, while 570 covers “new, performance turf” through final acceptance. Spec change for Jan 2019?

110- 1- 1	Clearing and Grubbing, LS/AC		<b>Designer enters quantity in acres;</b> contractor bids 1 Lump Sum. Quantities MUST be shown, by location and area(s), in summary box. See Program Management Bulletin 16-04. <b>Reports vary- Estimator reports may show secondary units for estimating (XX Acres) while Bid reports show 1 LS.</b>
110- 2-	Selective Clearing and Grubbing, Acre	July 2017	Quantities MUST be shown, by location and area(s), in summary box. See Program Management Bulletin 16-05.
110- 4-	Removal of Concrete	July 2017	Quantify all items by location and area. <b>Use Design Notes column to identify type of concrete, i.e. sidewalk, curb, walls.</b> Plan/horizontal areas for most items. Vertical area (length x height) for most walls. See BOE details.
110- 86-	Delivery of Salvageable Material to FDOT		Designer MUST QUANTIFY the items to be delivered. (Estimator/Bidder needs to know if this is 1 pick-up truck load, or multiple large truck loads.) <b>PENDING: see draft proposal (attached) for pay item usage</b>
121-	Flowable Fill		Pay item is blocked for general use. See BOE details for pipe bedding, backfill, etc.
162- and 163- items	Soils- for turf and landscape areas	Pending	Ongoing specification discussions.  <b>LANDSCAPE SOIL:</b> Landscape soil is <b>ONLY</b> to be included in locations where plants are to be installed under the <b>SAME CONTRACT</b> . Do not allow soil to be installed by Contractor A, when plants are to be installed by Contractor B (separate contracts), due to performance/establishment criteria. <b>Do not allow other “prepared soil” pay items to be used for this purpose.</b>
200s	Earthwork		No changes
334- 1-	Superpave Asphalt		Reminder: do not use 334- asphalt for temporary or miscellaneous applications.
337- 7-	Friction Course		High Polymer binders implemented per the specifications and State Materials Office.
350- group	Concrete Pavement		Do NOT use pavement items for bridge decks; there are separate joint items for bridge applications.
400- group	Concrete, per CY		Concrete, by class and application. Do NOT use cubic yard concrete for foundations (other than bridges), pads, or miscellaneous applications. Note: Substructure and Superstructure items are for Bridge use only; do not use for drainage or other roadway applications.



			<i>PENDING (with Index/Standard Plans future update):</i> Concrete for endwalls may be moving to Section 430- Drainage Structures.
400-	Retaining Walls (Concrete & Reinf Steel)		<b>Load pay items in the Roadway Category, regardless of where plans sheets are located.</b>
425-group	Inlets and Manholes		Reminder: If you have minor variations from the design standard, use the standard pay item. Significant design variations may need a project specific pay item.
430- 94-	Desilting Pipe		Please refer to the BOE for guidance. <ul style="list-style-type: none"> <li>Desilting as part of pipe liner: incidental to liner</li> <li>Desilting for endwall construction: incidental to endwall</li> <li>Desilting for pipe inspection: incidental to inspection</li> <li>Other applications- under review by Construction, Maintenance, and Drainage</li> </ul>
431-group	Pipe Liner	Pending	Specification under review. Types: Rigid pipe insert or Spray/Applied Purpose: Structural Reinforcement and/or Leak Reduction. Note- there may be significant material options, depending upon needs. Life cycle cost should be considered: Repair/maintenance vs Replacement
455-	Piling		Quantify based on the KNOWN lengths shown in the plans; do NOT include any contingency lengths or allowances for splices. All adjustments, per the specifications, will be completed by Construction.
514-	Filter fabric		No separate payment; cost is included in the item to which it is incidental.
517- 72-	Impermeable Liner		Requires project specific approval from State Drainage Office.
520-	Curb		"Curb" definition includes curb & gutter, traffic separator, valley gutter, etc. Asphalt curb pad is included, per spec; NO PLAN NOTE. Effective July 2017: Removal paid under 110-4- group.
530-group	Revetment Systems (Riprap, Gabions, etc.)		For project specific exceptions, please coordinate with the State Drainage Office early in the design process (60% plans).
536-	Guardrail		Changes completed last year, due to updates to design standards. MEASUREMENT: End-to-End length + each end treatment. NO ADJUSTMENT for end anchorage lengths, transition panels, or overlapping/nested panels.

548-	Retaining Walls		<p>Load pay items in the Roadway Category, regardless of where plans sheets are located.</p> <p>NOTE: A single retaining wall may be associated with 1 or more bridges, and/or may run along significant lengths of roadway. For consistency, all retaining walls are loaded in Roadway Category and identified by wall number and location on the Summary of Walls.</p> <p>Retaining Walls are NOT to be added to Summary of Structure Quantities- Bridge XXXXXX.</p>
570-	Performance Turf	July 2018 (?)	Measurement changed from “plan view” to “measure along the slope”. While this is already being completed by some districts, CADD software is being updated to help facilitate calculations. (Minimal change to most locations. Steep slopes are most affected.)
580- 1-	Landscape Complete, Lump Sum		ALL WORK MUST be detailed on the Landscape Tabulation Sheet. Remember to include soil, mulch, and all plants (species, quantity)
580- 2-	Tree Relocation, EA		<p>Estimator/Bidder needs to know the plant species and approximate size.</p> <p>Designer MUST show both the current and proposed locations shown on the tabulation sheet.</p>
590- 1	Irrigations System, Lump Sum		Designer MUST quantify all pipe, sprinkler heads, and pump components. Estimator/Bidder needs to know the sizes, lengths, and capacities to be able to price the system.
591- 1-	Irrigation Sleeve		<p>The sleeve is provided for KNOWN future landscaping, when the exact location of an irrigation system is available.</p> <p>DO NOT include a sleeve for “possible” enhancement or at locations where open trench is possible.</p>
630- 2-	Conduit		<p>Payment is based on the horizontal box-to-box length. No adjustment for vertical sweeps.</p> <p>Open Trench: anything under existing turf (pre-construction)</p> <p>Directional Bore: anything under existing pavement (pre-construction)</p> <p>Jack &amp; Bore: Railroad use only.</p> <p>Utilities: No payment under 630; use utility 1000 series items.</p> <p>Drainage: see 430- items.</p>
635-	Pull & Splice Box, Junction Box		<p>QPL Items. DO NOT Restrict products/sizes without approval.</p> <p>Sizes, by application, shown in the specification.</p>

639-	Electrical Power Service		Covers items from the utility to the cabinet (Wire, meter, disconnect, surge protection). Generally includes power supply at 240-480 volts. Does NOT include connections within the signals cabinet or beyond (generally 120 volts or less)
641-, 649- etc.	Pole Removal		Removal of the pole includes “all attachments”.
654-	Mid-Block Crossing		Includes In-Roadway Lights, Pedestrian Hybrid Beacon, Rectangular Rapid Flashing Beacon (RRFB), and Pedestrian Hybrid Beacon. Items/assemblies are ALL INCLUSIVE for use at mid-block crossings.  Rectangular Rapid RRFBs: Due to Federal Highway rescinding approval, RRFBs will be discontinued. Additional guidance is pending. Projects under design may continue, until further notice.  PENDING (Jan 2019 or earlier?): Specification and Pay Item changes for method of measurement, to separate “complete assembly- 1 assembly per crossing” into applicable “pieces”, similar to traffic signals.
660-	Vehicle Detectors		Ensure that the number of detectors is clearly shown, for each intersection. Some cabinet products require 1 per intersection, while others are 1 per approach!  Do not confuse “vehicle detectors” with “pedestrian detectors”. PENDING: Additional detector/technology types.
665-	Pedestrian Detectors		Do not confuse “vehicle detectors” with “pedestrian detectors”. PENDING: Additional detector/technology types.
695-	Traffic Monitoring Site (TRANSPORTATION STATISTICS OFFICE ONLY)		3 types of Traffic Monitoring Sites are possible: <ul style="list-style-type: none"> <li>• Transportation Statistics (695)</li> <li>• Traffic Ops (other 600 series)</li> <li>• Motor Carrier Compliance/MCSAW (770)</li> </ul> The 695 items are for TranStat Office use only!
700-	Signs		Single Post Signs- sizes limited by design standards! Electronic Signs: Discussion pending about placement in the signals/signing component plans.
706-	Reflective Pavement Markers (RPMs)		No separate payment under 706; normal installation is included under Final Surface pavement markings, 710-90.



707-	Internally Illuminated Reflective Pavement Markers		<p>PENDING: Developmental 707 specification will be merged with standard specification 706. Guidance is pending (TEM and/or FDM) for when IIRPMs may be used.</p> <p>NOTE: Significant cost difference (\$5. Vs \$100.) should be a factor in restricting use of IIRPMs.</p>
710-, 711-, 713-	Pavement Markings		BOE has many possible combinations. PPM, MUTCD, and Design Standards restrict which items may be available. Please ask if you do not see a needed item.
710-	Pavement Markings for MOT		NOTE: Per 102-10.1, only “standard crosswalks” are installed for work zone MOT markings. “Special Emphasis” crosswalks are installed with final surface/permanent markings (710-90 and 711-thermo). Quantities for 24” bars on special emphasis crosswalks should ONLY be included with final surface/permanent markings.
715-	Lighting		<p>Pay Items for Utility Conflict light pole (shorter vertical pole with longer arm) are available.</p> <p>See BOE Guidance for adding Arm and Luminaire to an existing pole or mast arm.</p> <p>Ongoing- upgrades to existing light poles to convert to LED luminaire. Additional items upon request!</p>
750-, 751-	Architectural and Enhancement items		Additional items added upon request.
770-	MCSAW- Motor Carrier Size and Weight	Pending	Pay item structure under review.
800s	Mass Transit		Additional items added upon request.
900s	Special, Developmental, and Monitored items		Additional items added upon request.
1000s	Utility Items		<p>Intended for JPA and phase -56.</p> <p>No applicable specifications or design standards. Tech Specs and/or plan details are required to describe work, materials, construction, measurement, and payment.</p> <p>Additional items added upon request.</p>

### Additional Notes:

## DRAFT: Delivery of Salvageable Materials

As of 2-6-2018

**For Signs, Signals, lighting, and other minor equipment**, for delivery to FDOT or maintaining agency:

- Identify items to be removed in the plans & tabulation sheet
- Include the pay item for the items to be removed; **do not include 110-86- AA**
- Include a plan note to indicate the delivery location & instructions

**For “significant items”** to be delivered to FDOT, local agency, or other destination:

- Identify items to be removed in the plans
- Include the pay item for the items to be removed
- **Include the 110-86- AA** pay item for the delivery
- Include a plan note to indicate the delivery location & instructions
- Summarize item(s) and quantities by location on Summary of Removal Items

Significant items may include bridge components (coordinate with Maintenance Office), State Historical Markers (coordinate with District Cultural Resources Office), ???

**Note:** Per the specifications, items not designated for delivery become the property of the contractor.

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